

# THE MARYLAND STATE HORTICULTURAL DEPARTMENT

Maryland Agricultural College, College Park, Md.

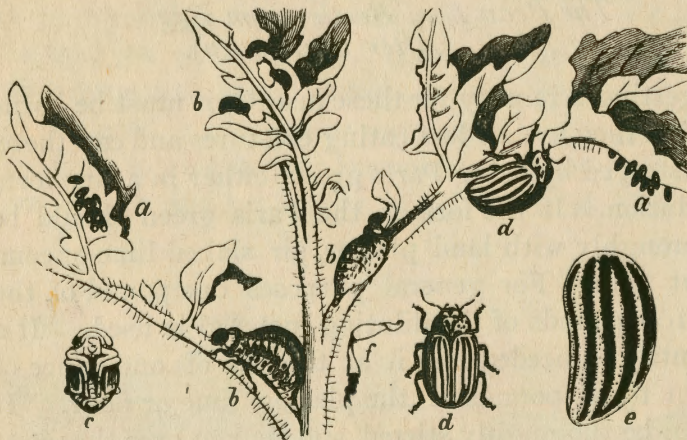
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## Special Instructions for Destroying Leaf-eating Insects with Paris Green.

BY WILLIS G. JOHNSON, STATE ENTOMOLOGIST.

Owing to the fact that the Colorado potato beetle has appeared in unusual numbers over a large area of this state and is at the present time doing serious damage to potatoes, we have considered it advisable to issue this circular, giving

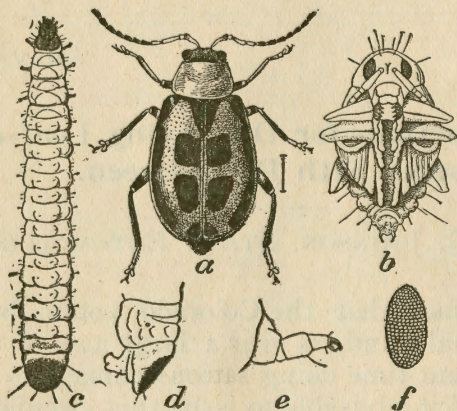


*The Colorado Potato Beetle and Its Various Stages of Development. (After Riley).*

special instructions for spraying potatoes and other plants of a similar nature, with Paris green. Tomato plants and beans are also being seriously injured over a large portion of the state by a small flea beetle and an insect known as the "bean leaf beetle". This latter creature eats holes in the



leaves of the bean and is very abundant at this time. The beetle responsible for this injury is a small one about one fourth of an inch in length, varying in color, and resembling a lady beetle in general form. It falls quickly to the ground when disturbed. It is shown in the illustration.



*The Bean Leaf Beetle, from Egg to Adult. (After Chittenden).*

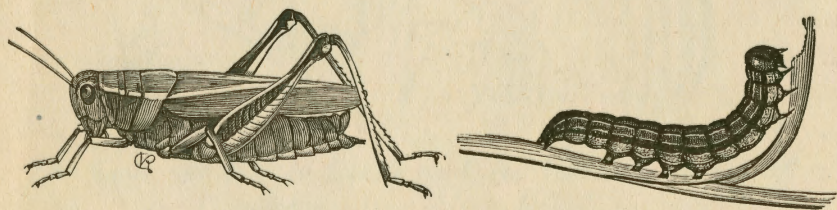
In suggesting a remedy for these insects, it must be borne in mind that they are all leaf eating creatures and can therefore be destroyed by using Paris green, either in a dry form or in a solution. If the former, the Paris green should be mixed thoroughly with land plaster, air slaked lime or common wheat flour. For general purposes one pound of the poison to 100 pounds of the diluting material is used. If a small quantity is needed mix it at the rate of one ounce of Paris green to six pounds of the plaster, lime or flour. It should then be thoroughly stirred, and shaken over the plant early in the morning when the dew is on. This can be accomplished by placing the material in an old bag or an old vessel, which has previously been perforated, so as to shake the material over the plant. The dry method is usually more satisfactory than the wet method, especially where the plants are small but when the plants begin to form continu-



ous rows, the wet method is preferable, being less expensive and more easily applied.

In preparing the Paris green for use, it is desirable to use about one pound of the poison in about 140 to 160 gallons of water. It is desirable, in most instances, where the poison is mixed in water to add a small quantity of good stone lime, which has been previously slaked, usually an amount equal to the weight of the Paris green used. This will help to hold the Paris green in suspension. The solution should be thoroughly stirred while being sprayed. It is at times advisable to use the Paris green in Bordeaux mixture; in this instance, four ounces of the Paris green are used in each barrel containing 40 or 50 gallons of Bordeaux and is sprayed over the plants.

In handling this material any ordinary sprayer can be used but if a large acreage of potatoes or tomatoes is planted it would be advisable for the grower to secure a good barrel spray pump with a four-row attachment, so that four rows can be sprayed at one time. One man can handle the entire apparatus, and spray 12 to 15 acres or more a day. The barrel is placed in a wagon or cart drawn by one horse. We will be glad to give further instructions about apparatus or the preparation and application of this material, if desired.



*The Army Worm and Grasshoppers.  
Other Leaf-eating Insects Destroyed by Paris green.*



